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TI - Forming thin-film electrode on piezoelectric substrate for surface acoustic wave device - by applying bias voltage in ion atmos. and depositing electrode material to set crystal orientation unidirectionally

AB - J08139546 A bias voltage is applied to the piezoelectric substrate in an ion atmos., and electrode material is deposited on the substrate so that crystal orientation can be set unidirectionally.

 USE - Used to form a thin-film electrode on a piezoelectric substance for a surface acoustic wave device.

- ADVANTAGE - An electrode high in resistance to electromigration is formed.

- (Dwg.1/8)

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PR - JP19940305392 19941114

PA - (MURA) MURATA MFG CO LTD

MC - L03-D04D

AB

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DC - L03 U14 V04 V06

IC - C23C14/48 ;C23C16/50 ;H03H3/08 ;H03H9/145 ;H05K3/38

AN - 1996-315269 [32]

PAJ

TI - FORMATION OF ELECTRODE OF SURFACE ACOUSTIC WAVE ELEMENT

 PURPOSE: To easily and economically form an electrode having superior stress migration resistance by filming an electrode material on a piezoelectric substrate while applying a bias voltage in an atmosphere where ions are present.

- CONSTITUTION: The atmosphere wherein ions are present is produced in the main body container 21 of a thin film forming device by using an ion source 23 for sputtering and a target 24. Then while the bias voltage is applied from a bias power source 25, the electrode material is filmed on the piezoelectric substrate 1 held by a substrate holder 22 so that it is oriented in a constant direction as to a crystal azimuth. Consequently, the electrode which is less in crystal defect and has superior stress migration resistance even when used at high applied power level can be formed. In this case, the orientation azimuth of the formed electrode is preferably a (111) plane, the applied bias voltage is preferably -300-1000V, and the current density of ions made incident on the substrate is preferably 0.01-10.00mA/cm<2>.

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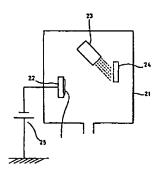
ABV - 199609

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- HO3H3/08 ;C23C14/48 ;C23C16/50 ;HO3H9/145 ;HO5K3/38



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